



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification ⁶ : A62C 39/00, A63B 69/00</p>	<p>A1</p>	<p>(11) International Publication Number: WO 99/01181</p> <p>(43) International Publication Date: 14 January 1999 (14.01.99)</p>
<p>(21) International Application Number: PCT/CZ98/00009</p> <p>(22) International Filing Date: 3 March 1998 (03.03.98)</p> <p>(30) Priority Data: PUV 6910-97 3 July 1997 (03.07.97) CZ</p> <p>(71)(72) Applicants and Inventors: JAROŠ, Vladimír [CZ/CZ]; V hůrkách 2143, 150 00 Praha 5 (CZ). KUBÁLEK, Ladislav [CZ/CZ]; Zázvorkova 1996/28, 150 00 Praha 5 – Stodůlky (CZ).</p> <p>(74) Agent: JANSKÝ, Bedřich; Květnická 674/2, 100 00 Praha 10 (CZ).</p>		<p>(81) Designated States: AT (Utility model), BG (Utility model), CN (Utility model), DE (Utility model), DK (Utility model), EE (Utility model), ES (Utility model), FI (Utility model), HU (Utility model), IL, NO, PL (Utility model), PT (Utility model), RU (Utility model), TR (Utility model), UA (Utility model), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).</p> <p>Published <i>With international search report.</i></p>
<p>(54) Title: EXERCISE TRAINING EQUIPMENT FOR EXERCISING AND TRAINING PROFESSIONAL ACTIVITIES</p>		
<p>(57) Abstract</p> <p>The essence of the exercise training equipment for exercising and training professional activities is that it consists of a square or rectangular shaped space tube load-carrying structure containing fixed horizontal foot-boards (20) and sloping ladders (21). On walls (1, 2, 3, 4) of the space tube load-carrying structure the training modules are attached. The mountain climbing wall (7) and equipment (8) for free-rappelling are attached on wall (1). Windows (9), ledges (10), a down-pipe (11), a lightning rod (12) and balconies (13) have been created on wall (2). Also on wall (3) vertical rods (14), horizontal rods (15) and fixed ladders (16) have been attached. On the wall (4) there are located rope ladders (17), a rope net (18) and vertical ropes (19). Between walls (1, 2, 3, 4) there are sloping ropes (5) and horizontal ropes (6) at varying heights. A part of the top space between the walls (1, 2, 3, 4) is provided with a horizontal roof. In the walls (1, 2, 3, 4) creep-through tunnels and shafts have been created and within the walls (1, 2, 3, 4) an imitation of a demolished site has been advantageously created.</p>		

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece	ML	Mali	TR	Turkey
BG	Bulgaria	HU	Hungary	MN	Mongolia	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MR	Mauritania	UA	Ukraine
BR	Brazil	IL	Israel	MW	Malawi	UG	Uganda
BY	Belarus	IS	Iceland	MX	Mexico	US	United States of America
CA	Canada	IT	Italy	NE	Niger	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NL	Netherlands	VN	Viet Nam
CG	Congo	KE	Kenya	NO	Norway	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NZ	New Zealand	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	PL	Poland		
CM	Cameroon	KR	Republic of Korea	PT	Portugal		
CN	China	KZ	Kazakhstan	RO	Romania		
CU	Cuba	LC	Saint Lucia	RU	Russian Federation		
CZ	Czech Republic	LI	Liechtenstein	SD	Sudan		
DE	Germany	LK	Sri Lanka	SE	Sweden		
DK	Denmark	LR	Liberia	SG	Singapore		
EE	Estonia						

EXERCISE TRAINING EQUIPMENT FOR EXERCISING AND TRAINING
PROFESSIONAL ACTIVITIES

Technical Field

The present invention relates to an exercise training equipment for exercising and training for professional activities connected with a user's movement in overcoming vertical obstacles and activities at heights.

Prior Art

There are no training installation complexes for exercising and training for professional activities performed at heights incorporating vertical movement which would concentrate the varying possibilities in such demanding training into a small space.

Disclosure of Invention

To a considerable degree this lack in equipment is removed by this exercise training equipment due to its technical solution with its principal based on a space tube load-carrying structure in a square or rectangular shape. This load-carrying structure which is laid-out in in a "scaffolding" fashion based on pipe scaffolding, contains solid horizontal foot-boards and sloped ladders and the training modules are fixed on their walls. These modules form the shell of the load-carrying construction. On one side there is a mountain climbing wall and equipment for free-rappelling and on the opposite wall there are windows, ledges, a down-pipe, a lightning rod and balconies. On the third side there are vertical and horizontal rods and fixed ladders and on the fourth wall there are rope ladders, a rope net and vertical ropes. Also among the walls there are fixed sloping ropes and horizontal ropes at various heights. The top area among the walls can be provided with a horizontal roof. Creep through tunnels, shafts and an imitation demolished site can be created within the walls. Due to this technical solution the advantage of the exercise training equipment is the increase in efficiency, intensity and attractiveness in drills for special capabilities, its small space requirements and therefore its ability to be placed practically. There it also saves time and eliminates

- 2 -

transportation costs where conveying users to various sites is concerned. The training equipment allows group training for as many as 30 users. Their safety during the training is ensured as well as the required levels of exercising and training methodology. Besides professional training the equipment also provides further alternatives in its utility such as in the area of preventing deviant social behaviour, for schools as well as outside school activities for young people, entertainment and also sport competitions.

Brief Description of Drawings

The technical solution will be more closely clarified with the aid of drawings. Fig. 1 depicts an axonometric projection of the training equipment, Fig. 2 a ground view of the training equipment, Fig. 3 a side wall in projection and Fig. 4 a side view of this side wall. In Fig. 5 there is another side wall in projection and in Fig. 6 and 7 the back and the front walls of the training equipment are seen in projection.

Examples of Invention Embodiment

As seen in picture 1 the exercise training equipment consists of a rectangular shaped load-carrying structure made of pipes which form a spatial structure. The load-carrying structure is made up of walls 1, 2, 3 and 4 in which there are located fixed horizontal foot-boards 20 and sloping ladders 21. On walls 1, 2, 3 and 4 are attached the training modules (described below), the basic functional elements of the training equipment, on which the training itself is done. As seen in pictures 1, 2, 3 and 4, the mountain climbing wall 7 and the free-rappelling equipment 8 are fixed on wall 1. As seen in picture 5, windows 9, ledges 10, a down-pipe 11, a lightning rod 12 and balconies 13 are created on wall 2. Picture 6 shows the fixed vertical rods 14, horizontal rods 15 and fixed ladders 16 on wall 2. Picture 7 shows the fixed rope ladders 17, rope net 18 and vertical ropes 19 on wall 4. Between walls 1, 2, 3, 4 there are fixed sloping ropes 5 and horizontal ropes 6 at varying heights as seen in picture 2. The training equipment structure is self-supporting and it does not require any anchoring. A horizontal and solid base is required for installation, such as

- 3 -

a concrete or asphalt surface, possibly solid ground.

Industrial applicability

The technical solution can be utilized for training specific specialists in the army, police, fire services, rescue services and for workers connected with repairs and maintenance of high buildings.

CLAIMS

1. The exercise training equipment for exercising and training professional activities is unique in consisting of a square or rectangular shaped space tube load-carrying structure containing fixed horizontal foot-boards (20) and sloping ladders (21) while the training modules are fixed on the walls (1, 2, 3, 4) of the space tube load-carrying structure.
2. The exercise training equipment in line with the first claim is unique by the fact that on wall (1) there is attached the mountain climbing wall (7) and equipment (8) for free-rappelling, on wall (2) windows (9), ledges (10), a down-pipe (11), lightening rod (12) and balconies (13) have been created and also on wall (3) there are attached vertical rods (14), horizontal rods (15) and fixed ladders (16). On wall (4) there are located rope ladders (17), a rope net (18) and vertical ropes (19) and between the walls (1, 2, 3, 4) there are sloping ropes (5) and horizontal ropes (6) at varying heights.
3. The exercise training equipment according to claims 1 and 2 is unique in that a part of the top space between walls (1, 2, 3, 4) is provided with a horizontal roof.
4. The exercise training equipment according to claims 1 and 2 is unique by the fact that creep-through tunnels and shafts have been created in walls (1, 2, 3, 4).
5. The exercise training equipment according to claims 1 and 2 is unique in the fact that an imitation of a demolished site has been created in walls (1, 2, 3, 4).

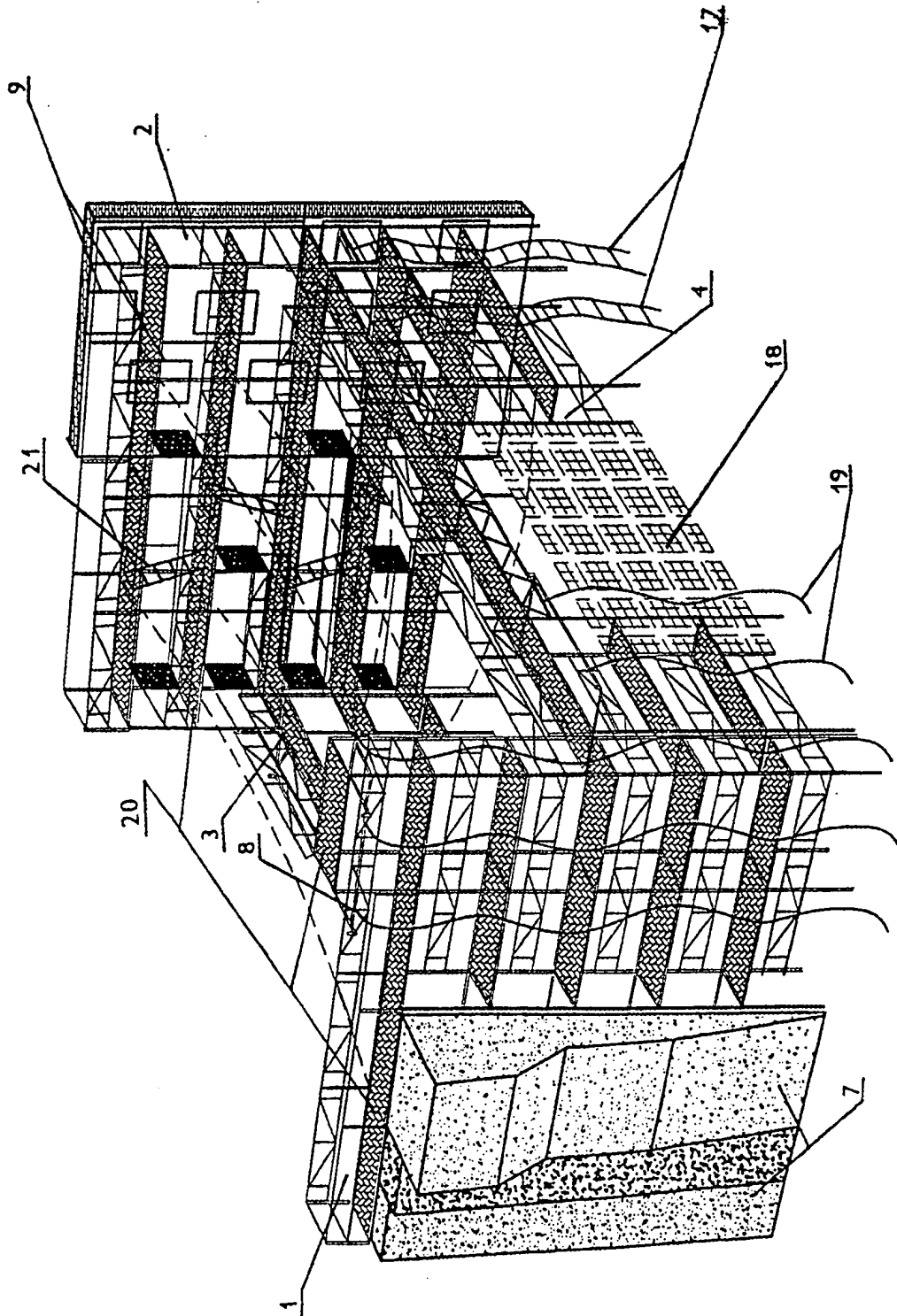


Fig. 1

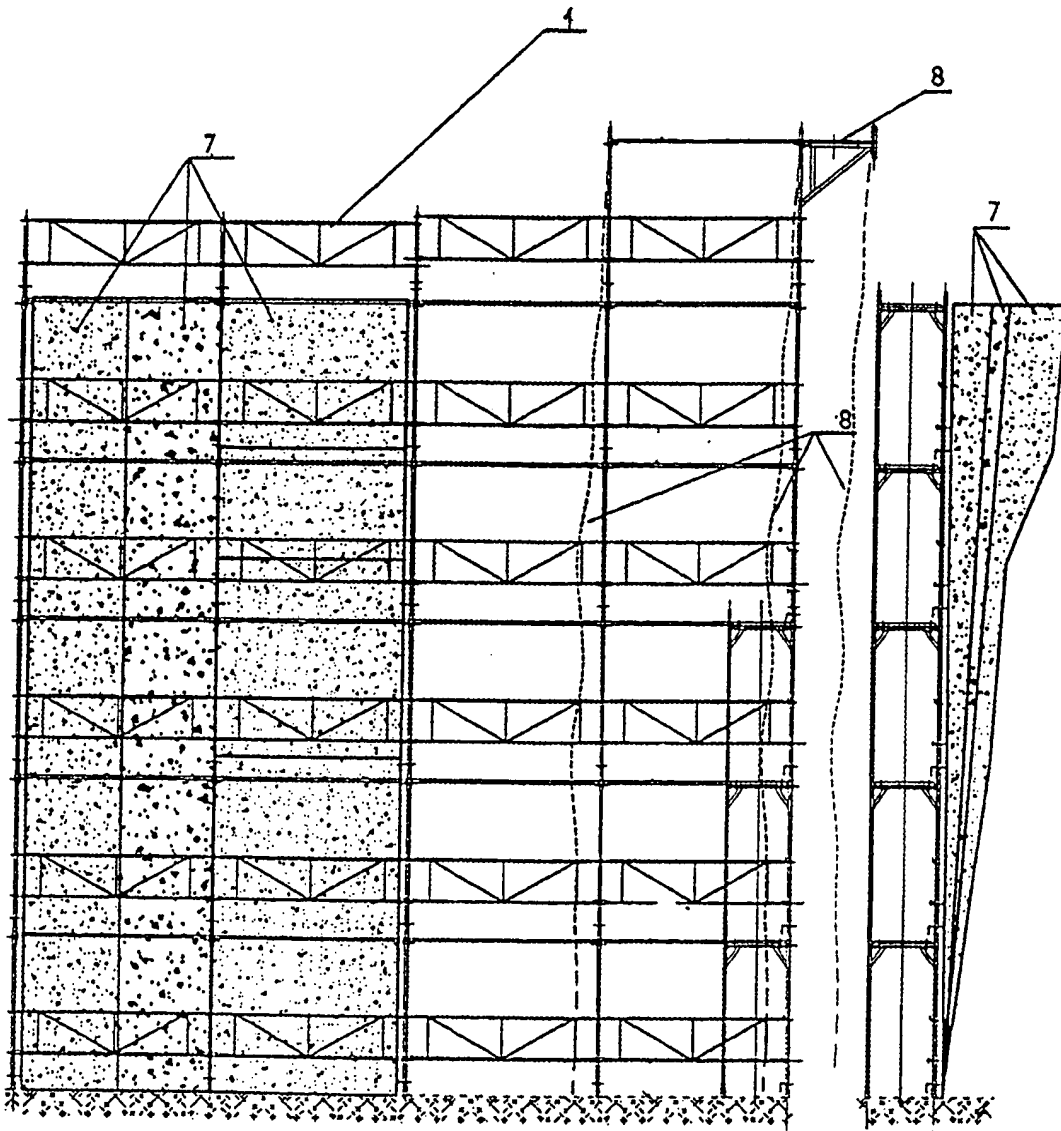


Fig. 3

Fig. 4

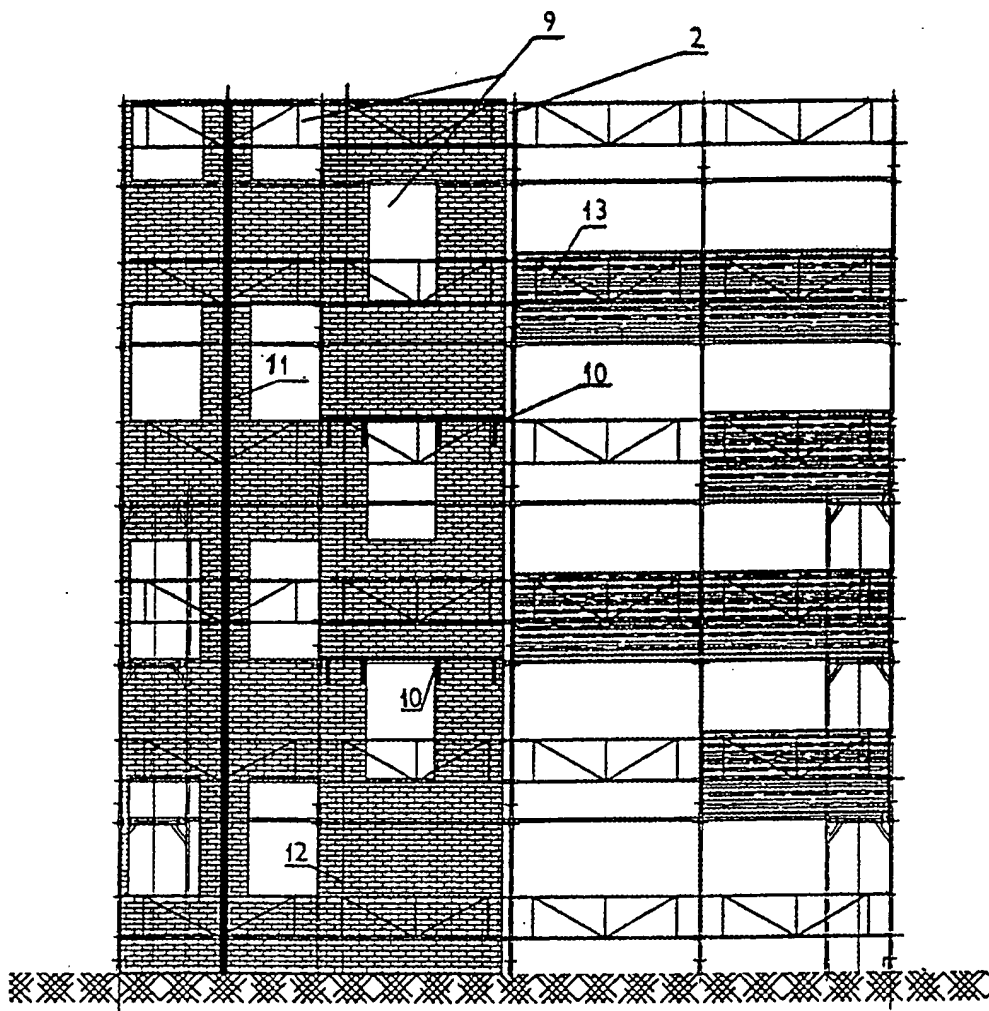


Fig. 5

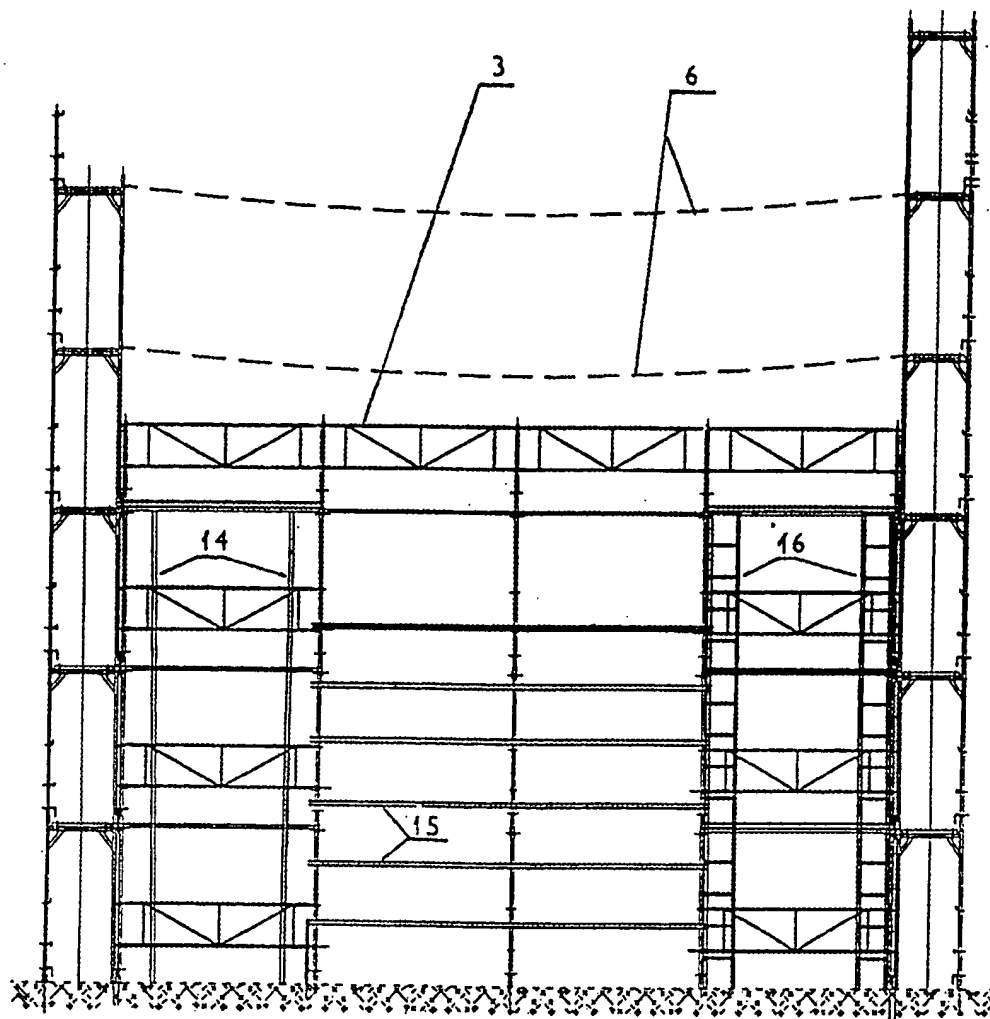


Fig. 6

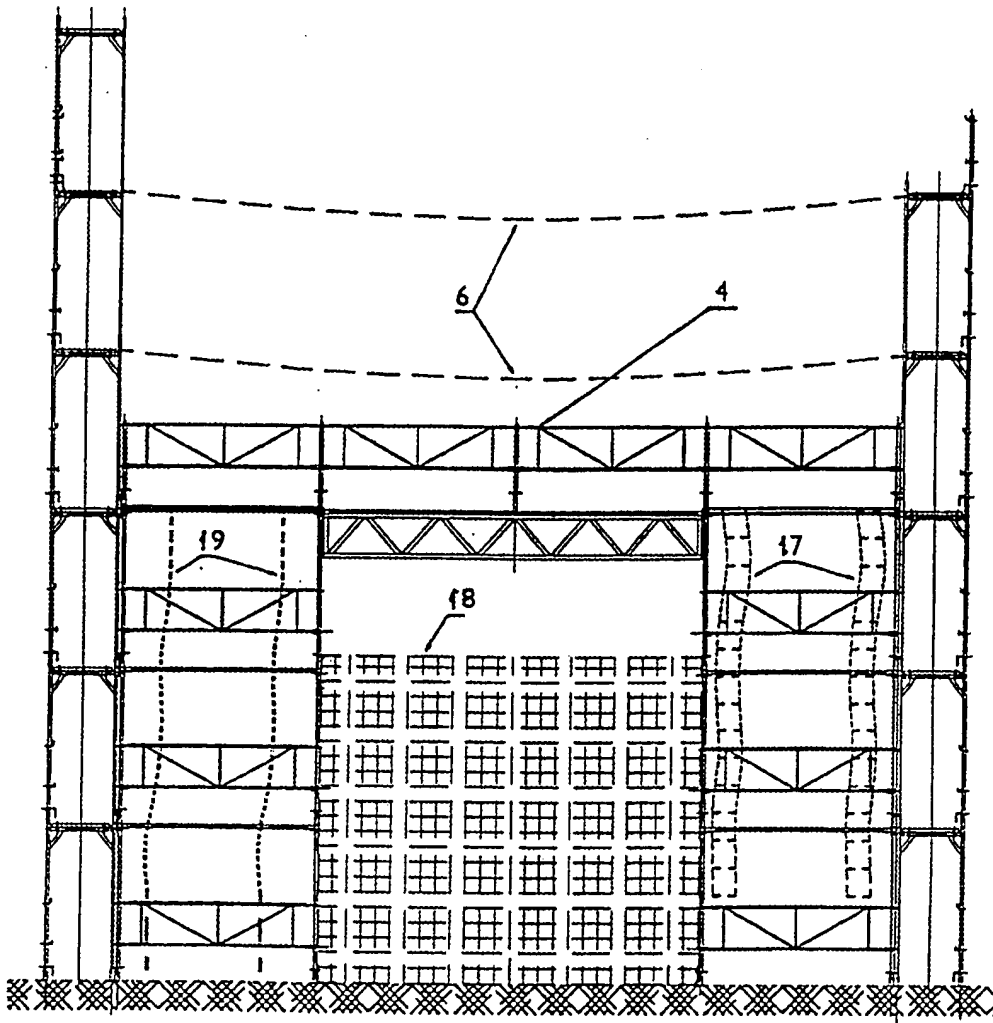


Fig. 7

INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER IPC 6: A62C39/00 A63B69/00		International Application No PCT/CZ 98/00009
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 6 A62C A63B		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 0 384 439 A (TISCH) 29 August 1990 see column 4, line 27 - line 40 see abstract; figures 1-3 ---	1
Y	FR 2 606 827 A (CHUZEVILLE) 20 May 1988 see abstract; figures ---	1
A	FR 2 694 703 A (DE RETTE) 18 February 1994 see page 4, line 10 - page 6, line 10; figure ---	1,2
A	US 5 203 707 A (MUSTO ET AL.) 20 April 1993 see the whole document ---	1,2
A	FR 2 671 733 A (VIALLET) 24 July 1992 see page 6, line 15 - line 20; figures 3,4 -----	3
<div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex. </div>		
<div style="display: flex;"> <div style="flex: 1;"> <p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="flex: 1;"> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"&" document member of the same patent family</p> </div> </div>		
Date of the actual completion of the international search <div style="text-align: center; font-weight: bold;">17 July 1998</div>		Date of mailing of the international search report <div style="text-align: center; font-weight: bold;">27/07/1998</div>
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer <div style="text-align: center; font-weight: bold;">Sedy, R</div>

INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No

PCT/CZ 98/00009

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 384439 A	29-08-1990	DE 3905471 A	23-08-1990
FR 2606827 A	20-05-1988	NONE	
FR 2694703 A	18-02-1994	NONE	
US 5203707 A	20-04-1993	CA 2086475 A	07-07-1993
		EP 0584294 A	02-03-1994
		WO 9314481 A	22-07-1993
FR 2671733 A	24-07-1992	AT 114250 T	15-12-1994
		DE 69200701 D	05-01-1995
		EP 0521141 A	07-01-1993
		WO 9212765 A	06-08-1992